directly communicate with each other, wherein multiple transceiver nodes in a clique utilize the same time slot for transmitting;
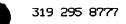
wherein the assigning step for each node comprises:

(a) identifying one of the nodes;

(b) identifying a first group of nodes, said first group of nodes comprising any nodes that directly communicate with the node identified in step (a);

(c) for each node in the first group of nodes, identifying a second group of nodes, said second group of nodes comprising any nodes that directly communicate with said each node in the first group of nodes; and

(d) including within a clique with the node identified in step (a)

    a node in said first group of nodes, and

    a node in said second group of nodes that communicates directly with the node identified in step (a) and with said node in said first group of nodes.

20. (Once Amended) The method of claim 30, wherein the assigning step for each node comprises:

(a) identifying one of the nodes;

(b) identifying a first group of nodes, said first group of nodes comprising any nodes that directly communicate with the node identified in step (a);

(c) for each node in the first group of nodes, identifying a second group of nodes, said second group of nodes comprising any nodes that directly communicate with said each node in the first group of nodes; and

(d) including within a clique with the node identified in step (a)

    a node in said first group of nodes, and

    a node in said second group of nodes that communicates directly with the node identified in step (a) and with said node in said first group of nodes.

21. (Once Amended) The method of claim 1, further comprising:

(e) identifying all possible cliques to which said one of the nodes belongs by repeating steps (b), (c), and (d) until all possible combinations of nodes have been explored.

24. (Once Amended) The method of claim 23, wherein the step of choosing time slots comprises assigning time slots to the cliques according to a hierarchy wherein:

(a)   cliques having a node that is a member of only one clique are first assigned time slots.

25. (Once Amended) The method of claim 24, wherein:

(b)   cliques having at least as many neighboring cliques as any neighboring clique are next assigned time slots.

26. (Once Amended) The method of claim 25, wherein:

(c)   cliques having two or more neighbors that were assigned time slots in steps (a) and (b) are next assigned time slots.

27. (Once Amended) The method of claim 26, wherein cliques having two or more neighbors that were assigned time slots in step (a) are next assigned time slots.

Please add new claims 30-31 to the application as follows:

30. (New)   A method for automatically managing the communication channel resources between two transceiver nodes having neighboring transceiver nodes in a network of transceiver nodes, wherein each node communicates during specific time slots and uses multiple frequencies on a time multiplex basis, the method comprising:

storing possible communication time slots and frequencies between nodes in the network at each transceiver node;

assigning each node to at least one of a plurality of cliques, wherein each of the plurality of cliques consists of a plurality of nodes that are positioned to directly communicate with each other, wherein multiple transceiver nodes in a clique utilize the same time slot for transmitting; and.

choosing time slots for each clique by assigning time slots to the cliques according to a hierarchy wherein:

(a)   cliques having a node that is a member of only one clique are first assigned time slots.

31. (New) The method of claim 30, wherein:

(b)   cliques having at least as many neighboring cliques as any neighboring clique are next assigned time slots;

(c)   cliques having two or more neighbors that were assigned time slots in steps (a) and (b) are next assigned time slots;

(d)   cliques having two or more neighbors that were assigned time slots in step (a) are next assigned time slots;

(e)   cliques having a node that is not Included in a clique that has previously been assigned a time slot are next assigned time slots; and

(f)   cliques that have not yet been assigned a time slot are assigned time slots.

— 4 —